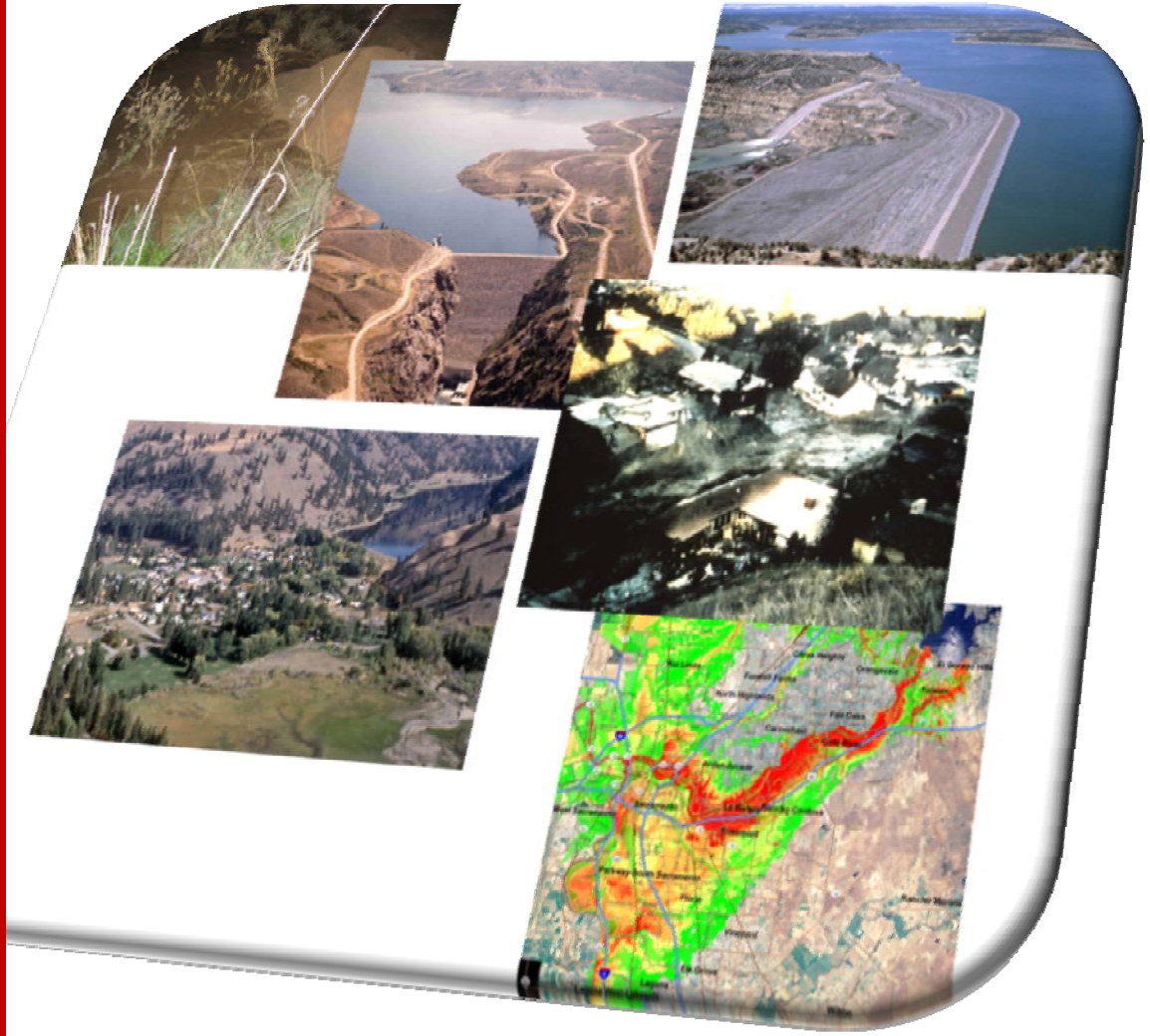
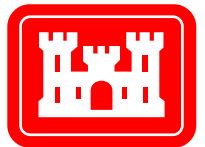


Joint Dam Safety Risk Management Charter

**U.S. Bureau of Reclamation
U.S. Army Corps of Engineers**



13 August 2007



Mission Statements

The mission of the Corps of Engineers is to provide quality, responsive engineering services to the nation including:

- Planning, designing, building and operating water resources and other civil works projects (Navigation, Flood Control, Environmental Protection, Disaster Response, etc.)
- Designing and managing the construction of military facilities for the Army and Air Force. (Military Construction)
- Providing design and construction management support for other Defense and federal agencies. (Interagency and International Services)

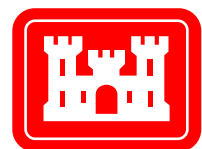
The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.



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Purpose

The purpose of this document is to outline the mutual framework for cooperation by the U.S. Army Corps of Engineers (Corps) and the U.S. Bureau of Reclamation (Reclamation) for dam safety risk management activities.

Authorities

Reclamation is participating in these activities pursuant to the authority provided in the Reclamation Safety of Dams Act of 1978 (Public Law 95-578) and the Reclamation Safety of Dams Act Amendments of 1984 (Public Law 98-404), 2000 (Public Law 106-377), 2002 (Public Law 107-117), and 2004 (Public Law 108-439), collectively referred to as the Safety of Dams Act

The Corps is participating in these activities pursuant to ?

Nothing in this charter shall be construed to alter the statutory authorities and or limitation of the cooperating agencies.

Objectives

Develop Joint Methodology Documents

Reclamation and the Corps recognize that developing a common procedure to evaluate risks is beneficial to both agencies. It will also be beneficial to the dam safety community and the engineering industry, many of whom will be evaluating risks at Reclamation and Corps facilities. One of the primary goals of this charter is to generate joint risk methodology documents that outline the procedures and options for successfully evaluating risks at Corps and Reclamation facilities.

Develop Consistent Policies

Although the two agencies have different missions, there are portions of each mission that are common, and developing consistent policies and procedures for portions of the missions that overlap would be beneficial to the government, the community, and the industry.

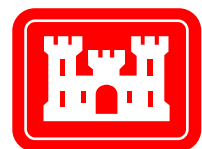
Develop Similar Methods to Communicate Risk

Reclamation and the Corps both present reports to stakeholders, partners, OMB, and the public that contain risk information which is crucial for project justification and risk communication. It would be beneficial to both agencies to strive for consistent methods to convey risks, evaluations, and accomplishments to outside entities.



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Focus on Risk Informed Decision-Making

Reclamation and the Corps both use life safety as the primary focus of risk management and decision-making. The two organizations are also responsible for implementing safety decisions in a economically responsible fashion and recognize that structures may pose economic risks in addition to life safety risks. Life safety and economics form the foundation for sound risk management strategies for both agencies.

Verify that risk informed decisions are being executed. (How O&M and Dam Safety interact)

Develop Professionalism and Technical Competency

Both agencies are going to require workforces with critical risk-bases skills. This will require standards, training, development, and education. Reclamation and the Corps will be better served by working together to maintain technical competency. By doing so, the two agencies can also manage their respective workloads and share experience and expertise.

Organization

These parts of each organization are relevant towards establishing a joint effort to develop risk policies, procedures, methods, and guidelines.

Reclamation's Organization

Dam Safety Office

The Dam Safety Office is responsible for prioritizing and managing risks for Reclamation facilities. This office is also responsible for planning, scheduling, and budgeting for dam safety activities. Information generated by the Technical Service Center (TSC) and contractors is used to make decisions, prioritize workload, and prioritize expenditures.

Technical Service Center

The Technical Service Center performs risk analyses for Reclamation with assistance and involvement from the Dam Safety Office, and Reclamation's Area and Regional Offices. The Technical Service Center also develops seismic and hydrologic loading information, performs loss of life studies and performs engineering analyses, all of which feed into the risk analyses. When staff is not available within the TSC, contractors are used to perform the above functions.

Risk Methodology Team (formerly the Risk Cadre)

Reclamation's risk methodology team currently consists of five core members from the Dam Safety Office and the Technical Service Center. This team serves as a "clearing-house" of risk information for the organization. The purpose of this team is to:

1. Develop procedures, guidelines, and tools for risk analyses and risk management.



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2. Coordinate risk analysis schedules
3. Develop methods to communicate risks
4. Coordinate outreach strategies for the organization
5. Sponsor development of methodology toolboxes
6. Coordinate training for management, staff, and consultants
7. Evaluate adequacy and consistency of risk analysis studies within Reclamation.

Corps' Organization

Headquarters

The Corps maintains a three-level centrally lead organization with representation at the Headquarters U.S. Army Corps of Engineers, Major Subordinate Commands (divisions), and districts. At Headquarters the Special Assistant for Dam Safety executes daily program activities with the help of the Dam Safety Program Manager and with the help of a special team prioritizes and schedule funds for projects with national dam safety interest incorporating risk information and life cycle asset management that are de-centrally executed.

Risk Methodology Team

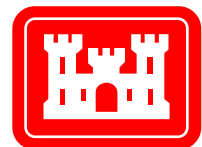
The Corps Engineering and Risk Reliability Directorate of Expertise consists of seven core members from various district offices serving as a virtual team. The multi-disciplinary team consists of hydrologic, geotechnical, structural, economic, and mechanical/electrical specialists responsible for:

1. Develop or oversee development of automated analysis and design tools for Engineering Risk and Reliability (ERR) and dam safety Portfolio Risk Assessment (PRA).
2. Develop reliability methodologies and tools for use by districts to support dam safety efforts.
3. Develop, review, and update Corps publications, criteria, and guidance related to ERR
4. Works with various Corps laboratories to identify research and development needs for ERR.
5. Develop and coordinate training for ERR and Dam Safety PRA and assist in maintaining national cadres of experienced engineers competent in ERR.
6. Coordinate outreach strategies for the organization



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Policies and Procedures Team

The Corps' Policy and Procedures team is responsible for updating guidance and regulations for dam safety for use of risk information and assessments. In addition, the team will develop risk communication strategies for the Corps.

Joint Organization, Roles, and Responsibilities

Success of jointly-developed risk management strategies and methods depends on timely decision making at all levels of both agencies. Both agencies have substantial technical talent and long established traditions in their approaches for evaluating major water resources features and projects. It is reasonable to expect that there will be differences in preferred methods of evaluating risks and developing policies. When such differences arise, the success of the joint effort depends on all parties understanding the issue, identifying the interests, and seeking alternative solutions that meet the needs of all parties.

Both agencies encourage resolution of issues at the lowest possible level with those parties expressing specific interests; provided that those interests are focused on the success of the project. When issues can't be resolved directly between the interested parties, agency management and leadership will encourage and facilitate use of alternative dispute resolution principles and methods to resolve the issues. When tentative agreement is reached on issues, the interested parties will determine whether the agreement should be simply documented as part of the ongoing activities on the project, reported to agency management/leadership for information, or placed before agency management/leadership for a decision or possible modification.

Leadership

The Chief of Reclamation's Dam Safety Office and the Special Assistant for Dam Safety to the Director of Civil Works are the management team responsible for the joint effort. Their role is to guide the teams and resolve conflicts if necessary.

Project Coordination Team

The Project Coordination Team will primarily be responsible for managing the development projects. This will consist of determining the appropriate staff to work on each toolbox. This team will also attempt to resolve conflicts and guide the individual teams. This team will meet on a monthly basis.

Policies and Procedures Team

The Policies and Procedures Team is tasked with the following primary responsibilities:

Develop Guidance Documents

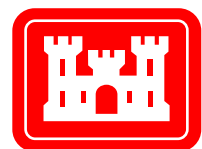
Develop Joint Public Protection Guidelines

Develop Strategies to Address Load Combinations



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Develop Strategies to Portray Risks
Develop Strategies to Portray Uncertainties
Develop Strategies to Communicate Risks
Develop Training Strategies
Develop Consistent and Accountable Budget Execution Policies

Discipline Leads

Each discipline will have a Reclamation lead and a Corps lead. These leads will be responsible for generating the documents and coordinating with their respective leads and team members. They will be responsible for all the toolboxes related to that specific discipline. The following lists the disciplines specifically related to joint risk strategy development.

Geotechnical Discipline Leads

Internal Erosion Toolbox
Seismic Toolbox
Static Stability Toolbox
Dam Break and Dam Breach Toolbox

Structural Discipline Leads

Spillway Erosion Toolbox
Static Stability Toolbox
Spillway Toolbox (Erosion and Jacking)
Seismic Toolbox
Spillway and Outlet Gates

Consequences Discipline Leads

Geospatial Data
Economic Consequences
Screening Tools
Empirical Methods
Simulation Methods

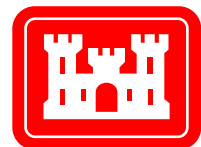
Risk Methodology Discipline Leads

Risk Engine
Toolbox Coordination
Length Effects
Combining Risks
Portraying Risks



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Portraying Uncertainty

Electrical and Mechanical Discipline Leads

Seismic Loading Discipline Leads

Hydrologic Loading Discipline Leads

Screening Tools

AEP for Floods

Security Discipline Leads

Program Management Leads

Annual Reporting

Program Management (Accountability)

Data Management

Inspections

Instrumentation

Emergency Management

PART

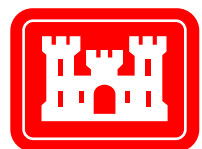
Competency and Training Leads

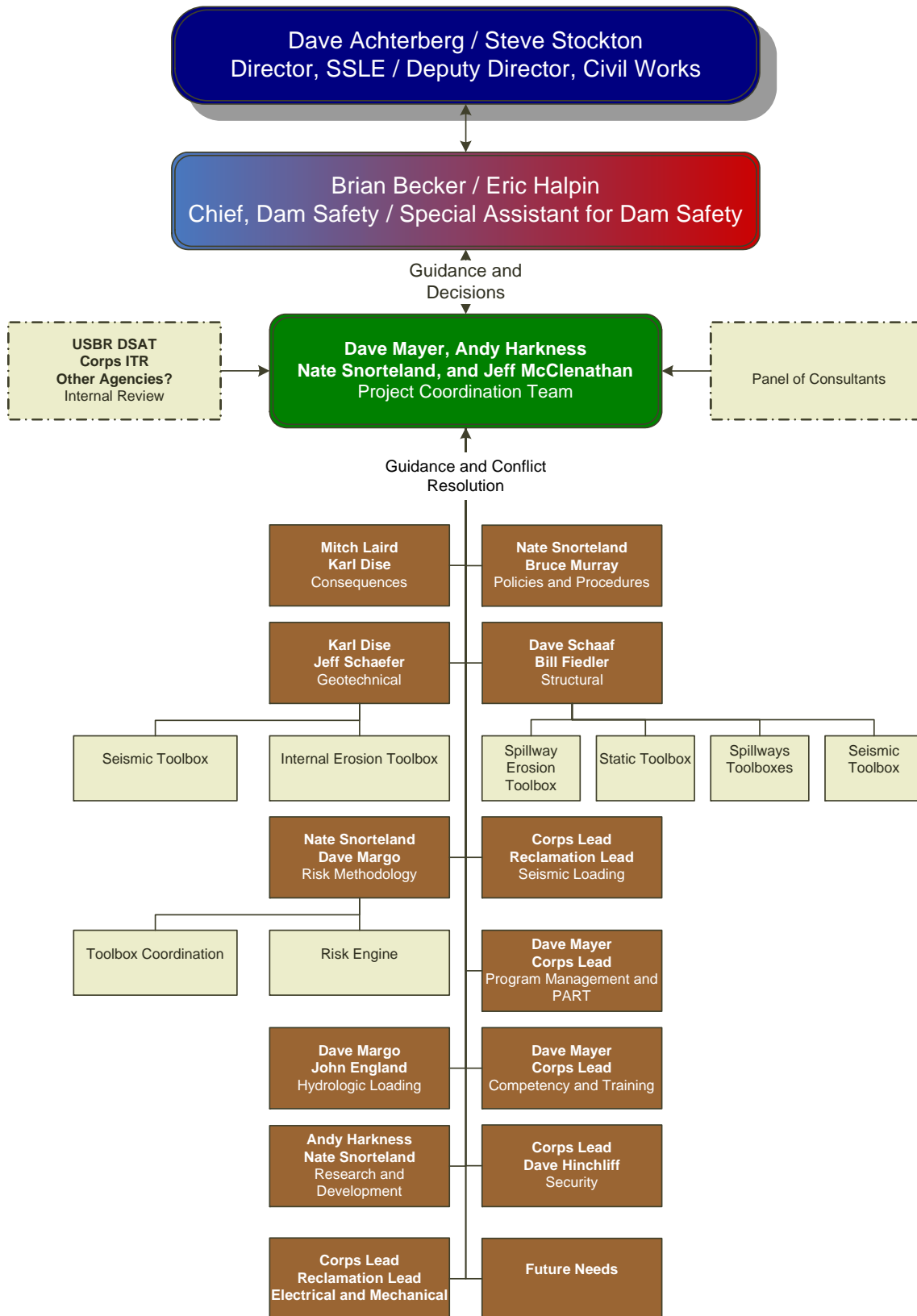
Research and Development Leads



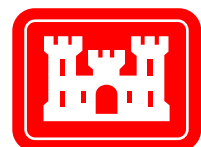
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Consultant Review Boards/Panels

Currently, Reclamation and the Corps use consultant review boards or panels to:

- Review risks at significant facilities;
- Review proposed modifications to existing facilities;
- Review methods used to evaluate risks;
- Review dam safety policies and procedures;
- Review inspections and O&M performance

Current Arrangements

Reclamation

Reclamation uses independent external consultant review boards continuously on projects once a decision has been made to take actions to reduce risks at a facility. These boards evaluate that decision and continue through the completion of risk reduction activities. Reclamation also retains a rotating independent review board that evaluates the overall effectiveness of the Dam Safety Program.

Corps

The Corps uses internal technical review panels on each project in its Major Rehab Program and DSA Program. Independent external consultant review panels are also employed to review modifications to major facilities and to verify dams classified in Dam Safety Action Classification I as needing immediate remediation.

Purpose

Reclamation and the Corps are similar because they own facilities and are self-regulated. This unique arrangement gives a unique perspective to the organizations. Because of this common institutional knowledge, it is in the best interest of both agencies to provide senior staff to serve as members of the external consultant review boards evaluating high risk facilities. This sharing will also allow the Project Coordination Team to better evaluate the needs of the respective agencies.

Organization

The Project Coordination Team will facilitate the assignment of senior members from each organization to serve on their respective consultant review boards.



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